

## **Claims**

### **WE CLAIM:**

1. A method of embedding a circuit, comprising the steps of:
  - providing a first layer of dielectric material;
  - providing a circuit having a predetermined length, width, and depth;
  - forming a cavity in the first layer of dielectric material substantially corresponding to the predetermined length and width of the circuit; and
  - depositing the circuit into the cavity.
2. The method of claim 1, wherein the step of providing the first layer of dielectric material comprises forming a layer of dielectric material at least as thick as the depth of the circuit.
3. The method of claim 1, further comprising the steps of:
  - providing a carrier and
  - wherein said step of providing a first layer of dielectric material comprises depositing the dielectric material on the carrier.
4. The method of claim 3, wherein said carrier is glass.
5. The method of claim 1, wherein the dielectric material is a photosensitive epoxy.
6. A method of embedding a circuit, comprising the steps of:
  - providing a carrier;
  - providing a first layer of dielectric material;
  - providing a circuit having a predetermined length, width, and depth;
  - providing a second layer of dielectric material;
  - forming a cavity in the second layer of dielectric material corresponding to the predetermined length and width of the circuit;
  - depositing the circuit into the cavity; and
  - providing a third layer of dielectric material.
7. The method of claim 6, wherein the circuit has one or more connection points and further comprising the steps of:

forming via openings in the third layer at positions substantially corresponding to each of the connection points of the circuit; and  
providing conductive material in the via openings.

8. The method of claim 6, wherein the step of providing a second layer of dielectric material comprises providing a plurality of sub-layers of dielectric material.

9. The method of claim 8, wherein the step of providing a plurality of second layers of dielectric material comprises:

providing a first sub-layer of dielectric material;  
forming a first cavity in the first sub-layer of dielectric material substantially corresponding to the predetermined length and width of the circuit;  
forming one or more via openings in the first dielectric sub-layer;  
providing conductive material in the via openings of the first sub-layer of dielectric material;  
providing a second sub-layer of dielectric material;  
forming a second cavity in the second sub-layer of dielectric material substantially corresponding to the predetermined length and width of the circuit and in a position substantially corresponding to the first cavity formed in the first sub-layer of dielectric material;  
forming one or more via openings in the second dielectric sub-layer; and  
providing conductive material in the via openings of the second sub-layer of dielectric material.

10. The method of claim 9, further comprising the steps of:

providing a sacrificial material in the first cavity;  
providing a sacrificial material in the second cavity; and  
removing the sacrificial material from the first and second cavity.

11. An embedded circuit module comprising:

a first layer of dielectric material;  
a circuit having a predetermined length, width, and depth;  
a cavity in the first layer of dielectric material substantially corresponding to the predetermined length and width of the circuit; and

wherein the circuit is embedded in the cavity.

12. The module of claim 11, wherein the first layer of dielectric material is at least as thick as the depth of the circuit.

13. The module of claim 11, wherein the dielectric material is a photosensitive epoxy.

14. An embedded circuit module, comprising:

a first layer of dielectric material;

a circuit having a predetermined length, width, and depth;

a second layer of dielectric material deposited upon the first layer of dielectric material;

a cavity in the second layer of dielectric material substantially corresponding to the predetermined length and width of the circuit;

a third layer of dielectric material deposited upon the second layer of dielectric material; and

wherein the circuit is embedded in the cavity in the second layer of dielectric material.